

**From:** Ex. 6 Personal Privacy (PP) [redacted]@gmail.com  
**Sent:** 5/19/2022 6:33:08 PM  
**To:** Jacobson, Marty (ECY) [MAJA461@ecy.wa.gov]; Flege, Kyrre (AGR) [kflege@agr.wa.gov]; Rau, Ben (ECY) [benr461@ECY.WA.GOV]; Sandison, Derek (AGR) [DSandison@agr.wa.gov]; Watson, Laura (ECY) [law461@ecy.wa.gov]; McLain, Kelly (AGR) [KAardal@agr.wa.gov]; Daniel (AGR) [DSulak@agr.wa.gov]; Pirzadeh, Michelle [Pirzadeh.Michelle@epa.gov]; Julia.Reitan@washington.sierraclub.org; Regan, Michael [Regan.Michael@epa.gov]; Eoc, Epahq [Eoc.Epahq@epa.gov]; washington@tnc.org; Anson.Tebbetts@vermont.gov; Terry.Smith@vermont.gov; psa@pugetsoundkeeper.org; Peak, Nicholas [Peak.Nicholas@epa.gov]; Andrew Hawley [hawley@westernlaw.org]; Craig Bowhay [cbowhay@nwifc.org]; steveo@co.skagit.wa.us; rickh@co.skagit.wa.us; mpia461@ecy.wa.gov; Jamila (GOV) [Jamila.Thomas@gov.wa.gov]; Blackmore, Laura (PSP) [laura.blackmore@psp.wa.gov]; Alex (PSP) [alex.mitchell@psp.wa.gov]; Ahren (PSP) [ahren.stroming@psp.wa.gov]; RCO MI General Info (RCO) [info@rco.wa.gov]; Kyle K (DFW) [Vincent.Adicks@dfw.wa.gov]; Erik (GSRO) [erik.neatherlin@gsro.wa.gov]; info@charlietebbutt.com; info@blueriverlaw.com; jlaughlin@cascwild.org; nick@cascwild.org; nrinfo@nrinfo.org [redacted]@gmail.com; blanouette@upperskagit.com; michaelk@skagitlandtrust.org; vonessen.ashley@nisqually-nsn.gov; Epstein, Larry (PSP) [larry.epstein@psp.wa.gov]; diane.hennessey@epa.gov; marine@washington.sierraclub.org; [redacted]@olympus.net; [redacted]@msn.com; Ralph (ECY) [RSVR461@ecy.wa.gov]; hpickernell@chehalistribe.org; andy.joseph@colvilletribes.com; dbarnett@cowlitz.org; lisa.martinez@hohtribe-nsn.org; rallen@jamestowntribe.org; jeromys@pgst.nsn.us; tomwooten@samishtribe.nsn.us; gmiller@skokomish.org; trgobin@tulaliptribes-nsn.gov; delano\_saluskin@yakama.com; bill.sterud@puyalluptribe-nsn.gov; nmaltos@sauk-suiattle.com; ewhite@stillaguamish.com; darylwilliams@tulaliptribes-nsn.gov; Inelson@tulaliptribes-nsn.gov; [redacted]@olympus.net; swroerts@ecy.wa.gov; ECY RE NWRO ERTS [nwroerts@ecy.wa.gov]; eroertscoordinator@ecy.wa.gov; croerts@ecy.wa.gov; Kirstenm@re-sources.org; alyssa@pugetsoundkeeper.org; Bonnie.Gail@washington.sierraclub.org; jennifer.hennessey@gov.wa.gov; jt.austin@gov.wa.gov; becky.kelley@gov.wa.gov; mbatayola@elcentrodelaraza.org; aurora@frontandcentered.org; Jarred.Erickson.cbc@colvilletribes.com; david.mendoza@tnc.org; CouncilOffices@puyalluptribe-nsn.gov; bill.sherman@atg.wa.gov; Sahar.fathi@atg.wa.gov; asa.washines@atg.wa.gov; Joe.Fitzgibbon@leg.wa.gov; Davina.Duer@leg.wa.gov; Mary.Dye@leg.wa.gov; Mark.Klicker@leg.wa.gov; Peter.Abbarno@leg.wa.gov; Liz.Berry@leg.wa.gov; Matt.Boehnke@leg.wa.gov; Jake.Fey@leg.wa.gov; Keith.Goehner@leg.wa.gov; Kirsten.Harris-Talley@leg.wa.gov; Alex.Ramel@leg.wa.gov; Sharon.Shewmaker@leg.wa.gov; Vandan.Slatte@leg.wa.gov; millie.piazza@ecy.wa.gov; colleen.keltz@ecy.wa.gov; mugdha.flores@ecy.wa.gov; annette.hoffmann@ecy.wa.gov; ty.keltner@ecy.wa.gov; [redacted]@icloud.com; wpc@washingtonpolicy.org  
**Subject:** Your Timely and Required Response Is Now Past Due...Weekly Reminder  
**Attachments:** Agricultural Pollution in Puget Sound - April 2016 - Web.pdf; Salmon\_PolicyBrief\_12-13-21\_2.pdf

Good morning Ms. Watson, Mr. Sandison, and Mr. Rau,

Just a friendly reminder that your responses are past due for the following issues itemized below. Kindly review your items and reply in the near future to the entire group. We are all confident you understand the importance of these issues and as such you will give your responses your highest priority.

1) Ms. Watson and Mr. Sandison with their explanation why tacitly allowing non point pollution in floodplains by not eliminating application during the flooding season, such as the 500 cu yards flooded twice in the Silvana area and manure applications on frozen ground and snow subsequently flooded through voluntary compliance is superior to using USDA BMPs eliminating flood plain manure applications during flooding season, and states such as Vermont whose regulations eliminate flood plain manure application (October 16th to April 14th) shown to be without burden to agriculture. Additional and similar agricultural nonpoint pollution issues include poor lagoon management requiring the emptying of manure lagoons during the Fall rainy season up to the edge of drainage ditches in communication with the Stillaguamish river near Stanwood.

I am also confident Ms. Watson and Mr. Sandison will create a "balanced" working group to address this flood plain non point agricultural issue as the Agricultural Water Quality Committee already has many other voluntary guidance chapters planned (work completion 2025 per Mr. Rau), none of which will adequately

address non point pollution specifically in flood plains. Perhaps Mr. Tebutt and his law office at state expense may be consulted to help draft the agricultural nonpoint pollution flood plain proposed regulations saving time and effort leading to rapid legislature approval and sooner improved water quality.

2) The 2015 "Nonpoint Water Quality Plan" supplied by Mr. Rau does not address or mention floodplain nonpoint agricultural pollution, a serious failing of this document for a serious problem known for so long, appearing to be conspicuously absent, clearly a subject of great importance in most every other state except Washington. Perhaps as this is related to item 1 above, Ms. Watson and Mr. Sandison may address this issue as well and their proposed solutions? The results of not addressing flood plain non point agricultural pollution may easily be seen in the reduction of commercial shellfish closures and the Puyallup watershed continued c+ rating, both identified in the Tribal Watershed Reports shown below.

3) Mr. Rau needs to address the non inclusive nature with significant bias in favor of agriculture special interests, under represented by the Tribes and environmental organizations composing less than 8% of the membership in the Agricultural Water Quality Committee. This is based on his committee roster supplied on 4/22/22. In contrast, other states such as Oklahoma have equal membership by agriculture and environmentally concerned groups, including Tribes, the roster is below to serve as comparison to Washington state.

The current composition of the Agricultural Water Quality Committee only highlights the biased nature of the committee which will once again be reflected in the voluntary compliance document now in progress. The Agricultural Water Quality Committee must include a balanced roster and be responsible for contracting with Mr. Tebutts and his law office at state expense to assure all agricultural compliance and stakeholder advocacy issues are addressed.

This deficiency of non inclusiveness, and lack of diversity in the stakeholder membership needs to be acted upon during the next Agricultural Water Quality Committee meeting before any other actions are taken. It is expected this process creating greater inclusivity and diversity will be overseen by a Governor's office representative.

4) Ex. 6 Personal Privacy (PP) has brought to our attention that regarding ERTs submissions, the WSDA administrator who oversees the DNMP took her information, acted as investigator, defense, judge and jury not providing Ms. Ex. 6 Personal Privacy (PP) with an opportunity to discuss or rebut her findings and simply closed the case. Perhaps in such cases a review committee comprised of membership by state, federal, tribes and environmental groups should be formed to review the process in which state inspectors may be held accountable for not protecting waters of the state as required by RCW 90.64. We would all agree Ms. Watson and Mr. Sandison will be eager to resolve important situations such as this as compliance is ultimately their responsibility. Furthermore, this may be thought of as an unbiased appeals committee which may meet electronically at the request of agriculture or concerned environmental groups or citizens as requested. Surely Ms. Watson and Mr. Sandison would be in favor of such a process along with oversight of the Governor's office on development and implementation of such a review board. Perhaps the board can be formed by members of the ECY Office of Equity & Environmental Justice. We look forward to Ms. Watson and Mr. Sandison addressing this important oversight issue.

These four issues listed above echo similar issues also reported by the Tribes, Western Environmental Law Center, and the Governor's office 12/21 policy brief proposing the Loomis Bill, none of these issues are new, yet they are perpetually ignored or given minimal priority. All of these documents are attached. The graphic in the Governor's brief shown below highlights the problem with the current agricultural regulations shown over many years with 71% of the salmon populations in crisis or not keeping pace. The Tribal cultural losses due to decreased salmon populations are incalculable and can not be defined through statistics or a dollar value. How can such values be given to a culture's practices which are lost?

Once passenger pigeons were estimated in the billions, they are now extinct, at the present rate of decline with the current ECY and WSDA regulations a similar fate awaits the salmon as well also once numbering in the billions, currently salmon populations are at 5% of historic levels as documented by the Western Environmental Law Center in their April 2016 report which is attached.

As Washington state's responsible guardians of our environment and native fishing cultures protected by treaties by assuring sound environmental policies and practices, Ms. Watson and Mr. Sandison need to abandon their time proven failed policies, including "voluntary compliance" as indicated by ever decreasing salmon populations and embrace successful proven regulatory practices and models without delay.

I propose a simple and valuable challenge, let 2022 be a year of regulatory enlightenment, a turning point for the good of the environment and all of Washington state casting off the shackles of the past failures and special interests...moving ahead for the good of all instead of a select few whose careless actions without repercussions from regulatory non compliance and associated nonpoint agricultural pollution they cause leading to lower water quality, less salmon, and the the continued destruction of Tribal cultures in the Puget Sound.

The time has come to prohibit manure applications in flood plains entirely eliminating the potential for unnecessary nonpoint agricultural pollution as recommended by the USDA BMPs and other states who have found this practice not to burden agriculture...to take one important step towards saving the few remaining salmon we still have.

*Time is not our friend. If we are to have any chance at recovery in our lifetimes before we lose more populations of salmon and our resident orcas, this action is needed now. If we are to expect the public sector to lead in this issue and reduce the burden on private property landowners, this action is needed now. If we want to leave this world a better place than when we found it, we need action now.* 2020 State of Our Watersheds Report, Nisqually River Watershed

Taking no action once issues are presented is in itself a decision. Let these decisions by Ms. Watson, Mr. Sandison, and Mr. Rau be noted on the email servers of federal, Tribal, state, and local governments for recorded history as reasons for the continued loss of Tribal cultures, decline of salmon populations, and other environmental issues we face degrading our environment.

Let us all "*challenge the status quo on salmon recovery*" as the late Ms. Loomis would want and called for in her own words.

Along with many of the other individuals listed in this email, awaiting the courtesy of prompt responses from Ms. Watson, Mr. Sandison, and Mr. Rau, I am, in Stanwood,

Ex. 6 Personal Privacy (PP)

03/01/22 stored manure on Stillguamish floodplain 12 hours after crested. Debris on guard rail on road indicated water was at least 1 foot higher. Reported 10/06/21, spread 04/01/22. This is the second flood of the winter the first was in 12/21 Silvana WA



STILLGUMISH TRIBE ECY and WSDA Policies at Work

## Nonpoint Pollution and Wastewater Treatment Lead to More Commercial Shellfish Closures

*Nonpoint source pollution and wastewater treatment are causing 838 acres of commercial shellfish growing area to be prohibited from harvest in Port Susan and South Skagit bays.<sup>1</sup> This is an increase of 538 acres (179%) from 300 acres prohibited in Port Susan and South Skagit bays in 2016.<sup>2</sup>*

### Puyallup Tribe 2020 Watershed Report

<https://geo.nwifc.org/sow/>

#### Water Quality Shows No Improvement

Since 2013, the average stream grade for the Puyallup River watershed remained the same at C+, on a scale of A-F, with the water quality and aquatic habitat conditions still considered "fair." The most common water quality concerns in Pierce County streams are fecal coliform bacteria, high levels of nitrogen and phosphorus, high temperature and low dissolved oxygen concentrations. These issues are typical, but difficult to treat in communities with a combination of urban and rural land uses.

## Salmon harvest, commercial and recreational catch



Source: Washington Department of Fish and Wildlife. Data is for hatchery and wild coho, chum, and Chinook salmon caught (tribal and non-tribal) in the state's rivers and the ocean as reflected on sport catch record cards and commercial landings.

16 REASONS FOR A WASHINGTON STATE FLOOD PLAIN AGRICULTURAL NON POINT POLLUTION ADVISORY GROUP TO PROPOSE ELIMINATION OF MANURE APPLICATION IN FLOOD PLAINS DURING THE FLOODING SEASON AS IMPLEMENTED BY OTHER STATES AND SUGGESTED BY THE USDA WITHOUT ADVERSELY AFFECTING AGRICULTURE

1. Graphic evidence through pictures of manure in contact with flood waters and applications to frozen snow covered lands in flood plains, the problem being likely much more extensive due to the relatively small flood plain area surveyed and lack of similar complaints. Multiplied through flood plains of the Grapt, Nisqually, Shnongwah and other river systems, this non point agricultural pollution may be projected to be a serious environmental problem leading to lowered salmon populations
2. Historic ERTs complaints over more than a decade describing similar problems
3. Farmers unable to manage lagoons applying manure next to drainage canals during typical rainy periods in October in flood plains claiming typical rainfall are some unexpected phenomena
4. Comprehensive reports by the Western Environmental Law Center and WSWFC which have not been implemented for non point pollution in flood plains
5. Apparent lack of equal stakeholder representation such as in the Salmon Recovery Funding Board and likely the Agriculture and Water Quality Advisory Committee
6. Reports by ECV and WSDA inspectors indicating "challenges" and farmer's general problems in weather and flood forecasting leading to non point pollution through runoff and floods which has been shown to be a chronic occurrence in the ERTs database in flood plains
7. USDA BMPs / guidance forbidding manure application in flood plains during the flooding season in flood plains
8. An Agriculture and Water Quality Advisory Committee to busy to address ex measures of the non point agricultural pollution problem in floodplains to make it a high priority
9. Millions of taxpayer dollars spent with minimal or no impact, while obvious significant non point agricultural floodplain problems due to special interests are ignored
10. Remaining salmon populations are at less than 5% of historic levels - Western State Environmental Law Center
11. A report from the Governor's office focused on the Luoma bill indicating over decreasing salmon populations, now at the critical level. The ever decreasing population indicates widespread environmental habitat problems to various salmonids due to habitat degradation in part due to entirely preventable non point pollution caused by manure applications in flood plains
12. Failed communications between ECV and WSDA for over two months leading to flood plain stored manure being flooded and liquid manure application on frozen snow covered ground not being prevented by timely investigation.
13. Both the WSDA (State) and ECV (Jacobson) inspection results indicating the voluntary regulations for preventing flood plain non point pollution continue to be ineffective.
14. Pseudoscientific manure applications: "Our investigation into these matters highlights some of the challenges of conducting agricultural activities in frequently flooded areas." Marty Jacobson ECV Inspector 4/1/22
15. No RCRA credit to grave site responsibility for manure, exporting to a hole causing stored manure on flood plain inundated by floods causing non point agricultural pollution
16. In practice "State Period Application of Manure in Washington State" ([https://static.sos.wa.gov/documents/other/0355A\\_11514\\_521213.pdf](https://static.sos.wa.gov/documents/other/0355A_11514_521213.pdf)) is ineffective in managing non point pollution in flood plains, particularly item 6 in the Limitations section as historically it has been shown flooding can not be predicted accurately, nor is there any incentive to be mindful of flooding frequently causing non point agricultural pollution without penalty.





Agency of Agriculture, Food & Markets  
Ag Resource Management Division  
116 State Street  
Montpelier, VT 05620  
[www.VermontAgriculture.com](http://www.VermontAgriculture.com)

[phone] 802-828-2431  
[fax] 802-828-2361

Dear Floodplain Farmer,

Enclosed you will find a packet of information that will assist you with understanding and complying with the State's new requirements for agricultural fields located in a floodplain. These new requirements are detailed in the new Required Agricultural Practices (RAPs) which set baseline management requirements for farms of all sizes in Vermont. Compliance for the 2017 and 2018 cropping seasons begins with first understanding where and how the new floodplain RAPs apply on your farm and second, with taking proactive steps to plan to comply and meet the dates outlined in the RAPs.

The Agency of Ag is here to support you and your farm to understand the rules, assist with planning efforts if requested, and to provide technical and financial assistance directly to your farm to implement new management strategies, which may be required to comply with the rules. If at any time you have questions regarding how these new rules apply to your farm, please call the Agency of Ag Water Quality Division directly at: **802-828-2431**

The RAPs for agricultural floodplain management include:

1. An extended winter manure spreading ban on frequently flooded soils: From October 16<sup>th</sup> – April 14<sup>th</sup>
2. Any manure applied to floodplains must be injected or otherwise incorporated within 48 hours, unless the field is in no-till, is cover cropped, or is planted to hay, pasture, or other perennial crop.
3. For floodplain fields that grow annual crops (e.g. corn for silage, sweet corn, soybeans, pumpkins), frequently flooded soils on those fields must be planted to cover crop by:
  - a. October 1<sup>st</sup> if the cover crop is broadcast on the surface
  - b. October 15<sup>th</sup> if the cover crop is drilled or otherwise incorporated into the soil
  - c. **OR** maintain 30% cover on the surface of the crop field after harvest (e.g. weeds, post-harvest residue [chaff])

## **General Application Guidelines for Manure from Winter Feeding Stations**

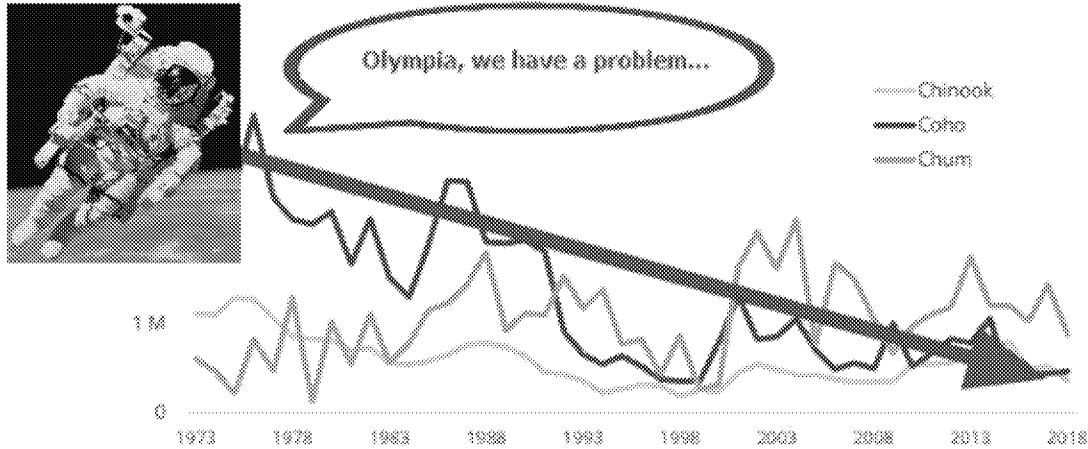
Manure is an excellent source of nutrients and organic matter for crop, pasture, and hay, fields. In spite of the known benefits for increasing crop yields, plant nutrients such as commercial fertilizer and manure are under increasing scrutiny due to concerns with water quality. Although healthy stands of perennial vegetation reduce runoff and soil loss, surface applied manure can still pose a risk to water quality. Use the following guidelines to minimize risks to surface and groundwater.

- Take soil tests every four years on fields where manure will be applied. Apply manure on the basis of crop nitrogen needs (N Basis) where soil test phosphorus levels (STP) are below 40-50 lbs. P/acre. Apply on the basis of phosphorus needs (P Basis) when STP levels are greater than 40-50 lbs. P/acre.
- Apply manure at the rate shown in Table 1 below, according to the amount of excess feed in the manure.
- Reduce commercial fertilizer rates when using manure as a nutrient source.
- Pastures grazed intensively seldom need significant applications of supplemental phosphorus or potassium as nearly 80% of these nutrients consumed by livestock are excreted in their manure.
- Service and calibrate application equipment to ensure manure is applied uniformly and at the correct rate. Do not clean application equipment in areas where water can get into a well, stream, river, or other waterbody.
- Do not apply manure within 200 feet of a stream, river, well, sink hole, tile drain inlet, or other waterbody. Consider larger setbacks on slopes greater than 5 percent.
- Do not apply manure on steep slopes unless measures are taken to control both soil erosion and runoff.
- Do not apply manure in sensitive areas (e.g. areas where the water table is 1 foot deep or less, where soils are extremely sandy or gravelly, in wetland areas, on fields that are saturated, on grassed waterways, in drainage areas, next to streams, or in a flood plain).
- Avoid manure applications on frozen or snow covered ground. If manure must be applied on frozen or snow covered ground, do so on areas where surface runoff is controlled.
- Do not apply prior to precipitation events where runoff amount or intensity would be expected to cause runoff.
- Avoid application when soils are wet in order to prevent compaction and rutting.
- Spread at times and in ways that will minimize potential odor problems (e.g. spread when the wind is not blowing, spread in the morning when the air is rising rather than in the afternoon, during holidays, etc.).
- Keep good records of manure applications. Record the crops grown, field(s) and acres that manure is applied to, rate of application, total amount of manure applied, time of application, conditions during application, crop yields, and soil and manure test results.





## Salmon harvest, commercial and recreational catch



Source: Washington Department of Fish and Wildlife. Data is for hatchery and wild coho, chum, and Chinook salmon caught (tribal and non-tribal) in the state's rivers and the ocean as reflected on sport catch record cards and commercial landings.

# Agricultural Pollution in Puget Sound:

Inspiration to Change Washington's Reliance on Voluntary Incentive Programs to Save Salmon

The Washington Department of Fish and Wildlife has shown that agricultural pollution is a major consequence. The remaining populations of salmon are at less than 5 percent of their historical levels.

April 2016





## 2020 State of Our Watersheds

*A Report by the Treaty Tribes in Western Washington*

Adding even more encouragement is the Billy Frank Jr. Salmon Coalition that was created in 2018. The coalition brings together leaders and innovators across policy, science, politics, business, conservation, recreational and other areas who are willing to challenge the status quo on salmon recovery.

*Laurence Roanish*

WRIs 1-23



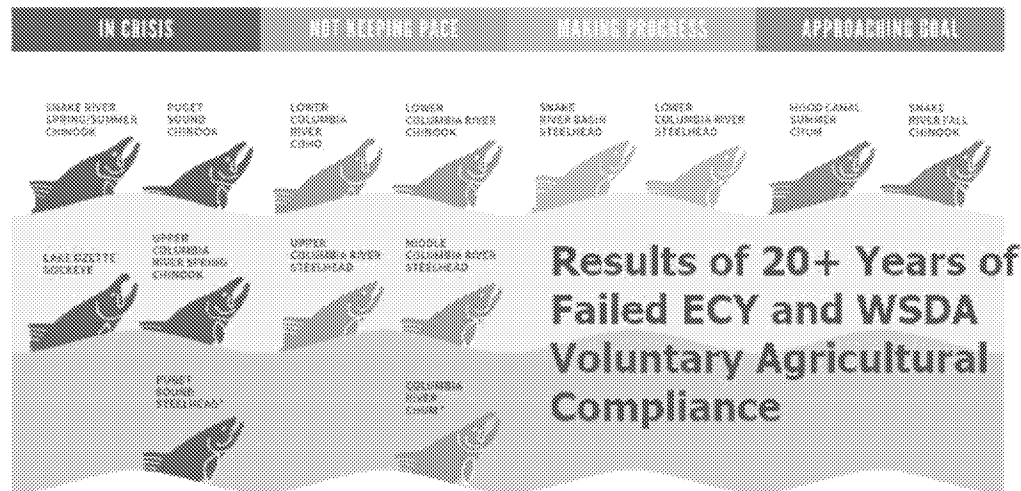
Timothy Terry, Regional Farm Strategic Planning Specialist (April 2016)

### **10 Commandments of Manure Application**

(King James version)

1. Thou shalt not spread manure within 20' of a ditch, intermittent stream, or surface inlet unless injected or immediately incorporated. Thou shalt record the date and time of such application.
2. Thou shalt not spread manure within 100' of a pond, lake, wetland, or perennial stream unless an adequate vegetated buffer strip has been established then thou may not spread closer than 35'.
3. Thou shalt not apply manure in fall or winter to open ground on high leaching index fields without first planting winter hardy cover crops where manure will be applied.
4. Thou shalt not spread manure on saturated, frozen, or snow covered soils unless such spreading is absolutely necessary. When absolutely necessary, thou shalt not spread within 48 hours of a predicted rainfall, snowmelt, or other runoff conditions.
5. Thou shalt not spread manure within 100' of any well – yours or your neighbor's well. Thou shalt know where wells border thy fields and the potential for groundwater contamination from thy farm's activity! Thou shalt request information on the location of thy neighbor's (or rental landowner's) wells.
6. Thou shalt not locate temporary manure piles within 300' of a well, surface water, or surface inlet. Thou shalt locate them where clean water will be excluded and access is practical even during poor weather conditions.
7. Thou shalt not spread manure in the fall or winter on fields that have a potential to flood.
8. Thou shalt not exceed the soil's infiltration or water holding capacity in any total single application of liquid manure. Thou shalt adjust this amount to avoid runoff or loss to subsurface tile drains.
9. Thou shalt not allow fall and winter manure applications to exceed 50% of the next crop's nitrogen needs.
10. Thou shalt not commence manure spreading without an annual detailed review from thy crop consultant. Thou may reduce, but thou shalt not exceed, the recommended applications rates.

### **Salmon abundance**



\* Lacks complete data

Source: Washington Department of Fish and Wildlife

# Still Rivers

An Expose on How the ECY and  
WSDA Capitulated to Agriculture  
Special Interests and Knowingly,  
Willingly, and Needlessly  
Destroyed Northwest Salmon  
Runs at the Expense of Native  
American Cultures and Society

Washington State  
#1 Best Seller!

## Nonpoint Source Working Group – PARTICIPANTS OKLAHOMA

AEP	Oklahoma Farm Bureau
American Farmers & Ranchers	Oklahoma Geological Survey
Association of Central OK Governments	Oklahoma Independent Petroleum Association
Bureau of Land Management	Oklahoma Municipal League
Bureau of Reclamation	Oklahoma Rural Water Association
City of Oklahoma City	Oklahoma Scenic Rivers Commission
City of Tahlequah	Oklahoma Secretary of the Environment
City of Tulsa	Oklahoma State University
Environmental Protection Agency Region 6	Oklahoma Water Resources Board
Farm Service Agency	Osage Tribe
Indian Nations Council of Governments	OU Health Sciences Center
Inter-tribal Environmental Council	OU Water Center
Land Legacy	Pawnee Tribe
Natural Resource Conservation Service	Poteau Valley Improvement Authority
Nature Conservancy	Save the Illinois River
Oklahoma Association of Conservation Districts	Sierra Club
Oklahoma Cattlemen's Association	Tulsa Municipal Utility Authority
Oklahoma Corporation Commission	University of Oklahoma
Oklahoma Dept. of Agriculture, Food & Forestry	U.S. Army Corps of Engineers
Oklahoma Dept. of Environmental Quality	U.S. Fish and Wildlife Service
Oklahoma Dept. of Transportation	U.S. Geological Survey
Oklahoma Dept. of Wildlife Conservation	



state-of-our-watersheds-sow-2020-final-web.pdf